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ATTORNEYS AT LAW

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Tyson A. Kamuf  
Mark W. Starnes  
C. Ellsworth Mountjoy  
Susan Montalvo-Gesser

November 19, 2007

**Via Federal Express**

Ms. Elizabeth O'Donnell  
Executive Director  
Public Service Commission  
211 Sower Boulevard, P.O. Box 615  
Frankfort, Kentucky 40602-0615

Re: In the Matter of: Consideration of the Requirements of the  
Federal Energy Policy Act of 2005 Regarding Fuel Sources  
and Fossil Fuel Generation Efficiency, Administrative Case  
No. 2007-00300

Dear Ms. O'Donnell:

Enclosed are an original and seven copies of the response to data requests of Big Rivers Electric Corporation for the above referenced matter. The undersigned certifies that he supervised in the preparation of the response and that the response is true and accurate to the best of his knowledge, information, and belief formed after a reasonable inquiry. I certify that a copy of the response has been served on the attached service list.

Sincerely,



Tyson Kamuf

TAK/ej  
Enclosures

cc: Michael H. Core  
David Spainhoward  
John Talbert  
Mike Thompson  
Service List

Telephone (270) 926-4000  
Telecopier (270) 683-6694

100 St. Ann Building  
PO Box 727  
Owensboro, Kentucky  
42302-0727

**SERVICE LIST  
ADMINISTRATIVE CASE NO. 2007-00300**

Charles Lile  
East Kentucky Power Cooperative  
4775 Lexington Road  
P.O. Box 707  
Winchester, Kentucky 40392-0707

Lonnie E. Bellar  
Vice President, State Regulation and Rates  
E.ON U.S. LLC  
220 West Main Street  
Louisville, Kentucky 40202

Mark R. Overstreet, Esq.  
Stites & Harbison PLLC  
421 West Main Street  
P.O. Box 634  
Frankfort, Kentucky 40602-0634  
Counsel for Kentucky Power Company

John J. Finnigan, Jr.  
Associate General Counsel  
Duke Energy  
130 East Fourth Street, R. 25 At II  
P.O. Box 960  
Cincinnati, Ohio 45201-0960

Allyson K. Sturgeon  
Senior Corporate Attorney  
Kentucky Utilities Company  
Louisville Gas and Electric Company  
220 West Main Street, P.O. Box 32010  
Louisville, Kentucky 40232  
Counsel for Kentucky Utilities Company  
and Louisville Gas and Electric Company

RECEIVED  
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PUBLIC SERVICE  
COMMISSION

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

CONSIDERATION OF THE REQUIREMENTS	)	
OF THE FEDERAL ENERGY POLICY ACT OF	)	ADMINISTRATIVE
2005 REGARDING FUEL SOURCES AND	)	CASE NO. 2007-00300
FOSSIL FUEL GENERATION EFFICIENCY	)	

BIG RIVERS ELECTRIC CORPRATION'S RESPONSE TO  
THE FIRST DATA REQUEST OF COMMISSION STAFF

November 19, 2007



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THE FIRST DATA REQUEST OF COMMISSION STAFF  
ADMINISTRATIVE CASE NO. 2007-00300  
November 19, 2007

1

2 **Item 1)** Provide the following for each unit:

3 a. What was the heat rate (Btu/kWh) at the time of initial operation (both  
4 name plate and actual experience)?

5 b. What is the heat rate today?

6 c. Identify the actions that the company has taken that have impacted heat  
7 rate and identify whether the actions have had a positive (by lowering the heat rate) or negative  
8 impact (by increasing the heat rate).

9

10 **Response)**

11 **1a)** See the spreadsheet attached to this response as Exhibit A.

12 **1b)** Since 1998, Big Rivers Electric Corporation ("Big Rivers") has leased its  
13 generating units to Western Kentucky Energy Corp. ("WKE"). Big Rivers has not operated any  
14 generating units since that time, and for that reason, Big Rivers is not in a position to provide a  
15 response to this data request. Big Rivers forwarded this data request to WKE for a response.  
16 WKE's response is attached to this response as Exhibit B.

17 **1c)** See the response to Item 1b.

18

19

20 **Witness)** Mike Thompson

**BREC Units Design Heat Rates (BTU/kwhr, annual)  
at Full Rated Capacity**

	<b>Comm Year</b>	<b>Design Boiler Eff</b>	<b>Design turbine heat rate</b>	<b>Design unit gross heat rate</b>	<b>initial gross demonst. heat rate</b>	<b>initial net demonst. heat rate</b>
<b>C-1</b>	1969	88.02%	7,974	9,059	9,360	9,905
<b>C-2</b>	1970	88.02%	7,974	9,059	9,360	9,905
<b>C-3</b>	1971	87.92%	8,005	9,105	9,405	10,060
<b>G-1</b>	1980	87.54%	8,245	9,418	9,620	10,570
<b>G-2</b>	1981	87.54%	8,235	9,407	9,610	10,560
<b>H-1</b>	1973	87.92%	8,016	9,117	9,370	10,020
<b>H-2</b>	1974	87.92%	8,045	9,150	9,400	10,050
<b>R-1</b>	1966	86.90%	8,954	10,303	10,350	11,250
<b>W-1</b>	1986	88.87%	8,174	9,198	9,450	10,000

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**From:** Toerne, Rob [mailto:Rob.Toerne@eon-us.com]  
**Sent:** Friday, November 16, 2007 1:38 PM  
**To:** Mike Thompson  
**Cc:** David Spainhoward; Jim Miller; Dowdy, Tim; Bowling, Ralph; John Talbert  
**Subject:** RE: PSC Data Request 11-09-07 Case No 2007-00300

Mike,

Western Kentucky Energy (WKE) respectfully declines to provide the data requested under Case Number 2007-00300 of the Kentucky Public Service Commission (KPSC). This response is consistent with WKE's previous KPSC data requests made since the inception of the lease in 1998. WKE is a non-jurisdictional independent power producer and considers this data to be business sensitive and confidential to our operations. Release of this information has the potential to cause WKE a loss in market competitiveness.

*Rob Toerne*  
270.844.6029

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**From:** Mike Thompson [mailto:mthompson@bigrivers.com]  
**Sent:** Tuesday, November 13, 2007 4:18 PM  
**To:** Toerne, Rob  
**Cc:** 'David Spainhoward'; 'Jim Miller'  
**Subject:** PSC Data Request 11-09-07 Case No 2007-00300  
**Importance:** High

Rob,  
BREC and other utilities in the state have received a data request from the PSC pertaining to "Considerations of the Requirements of the Federal Energy Policy Act of 2005 Regarding Fuel Sources & Fossil Fuel Generation Efficiency" (PSC Case No 2007-00300).  
Per the E.ON-US Agreements as operator of the BREC generators please provide responses to the six questions attached by close-of-business Friday (11/16/07) in order for BREC to respond to the PSC by the Order deadline.  
If you have any questions please call.

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BIG RIVERS ELECTRIC CORPORATION'S RESPONSE TO  
THE FIRST DATA REQUEST OF COMMISSION STAFF  
ADMINISTRATIVE CASE NO. 2007-00300  
November 19, 2007

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2 **Item 2)** What is the average system-wide heat rate?

3

4 **Response)** See the response to Item 1b.

5

6

7 **Witness)** Mike Thompson



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November 19, 2007

1

2 **Item 3)** What technologies are available for increasing the efficiency by lowering the heat  
3 rate of installed fossil fuel generation? What are the costs and benefits associated with these  
4 technologies?

5

6 **Response)** See the response to Item 1b.

7

8

9 **Witness)** Mike Thompson



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November 19, 2007

1

2 **Item 4)** What is the reasonable goal for heat rate improvement (lessening the heat rate)  
3 over a 10-year planning horizon for individual generating units and the company's fleet of fossil  
4 fuel generation?

5

6 **Response)** See the response to Item 1b.

7

8

9 **Witness)** Mike Thompson



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ADMINISTRATIVE CASE NO. 2007-00300  
November 19, 2007

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**Item 5)** Although the Integrated Resource Planning and Certificate of Public Convenience and Necessity processes allow for consideration of generation efficiency initially, is there any Commission mandated process that provides for continued consideration of generation efficiency?

**Response)** The existing Integrated Resource Plan (“IRP”) process involves a comprehensive review of the existing and planned generation resources of each utility subject to the IRP process. See 807 KAR 5:058 Section 8. This review already allows for an ongoing review of generation efficiency. See 807 KAR 5:058 Section 8(2)(a) (“The utility shall describe and discuss all options considered for inclusion in the plan including: (a) Improvements to and more efficient utilization of existing utility generation, transmission, and distribution facilities”). If any problems relating to generation efficiency are uncovered in the IRP process, the Public Service Commission has the authority to initiate a formal proceeding to address those problems. See KRS 278.250; KRS 278.260. Moreover, the review of generation resources and generation efficiency through the IRP process is done within the context of considering the utility’s plan to provide “an adequate and reliable supply of electricity...at the lowest possible cost.” 807 KAR 5:058 Section 8(1).

**Witness)** David Spainhoward



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1

2 **Item 6)** How does the company consider generation efficiency on an ongoing basis after  
3 the initial operation of a generating unit? Are annual or periodic studies performed? Explain in  
4 detail.

5

6 **Response)** See the response to Item 1b.

7

8

9 **Witness)** Mike Thompson